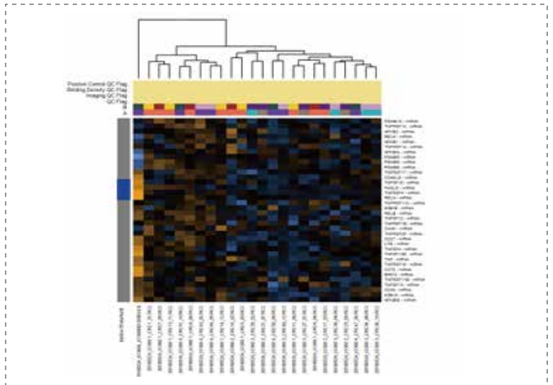
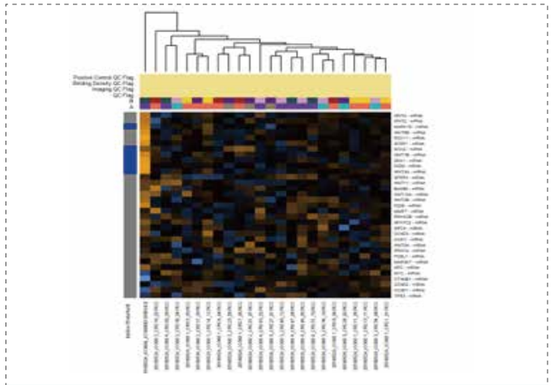
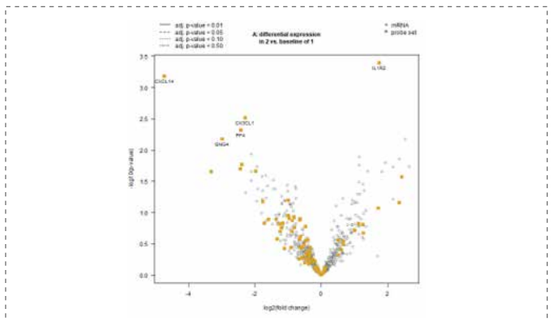


NF-kappaB Signaling Pathway

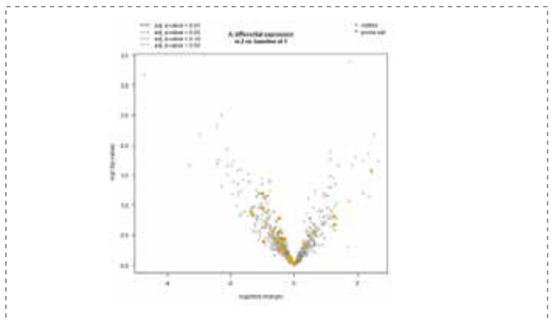


Wnt Signaling Pathway

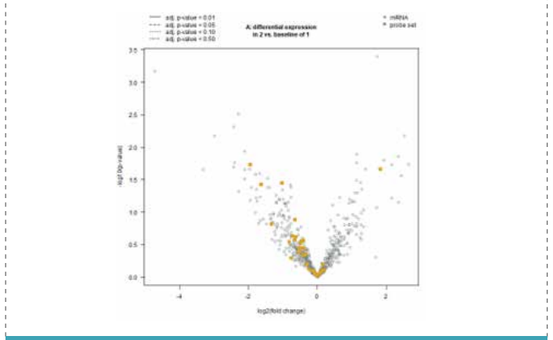
The Performance of Different Pathway Genes in the Volcano Plot



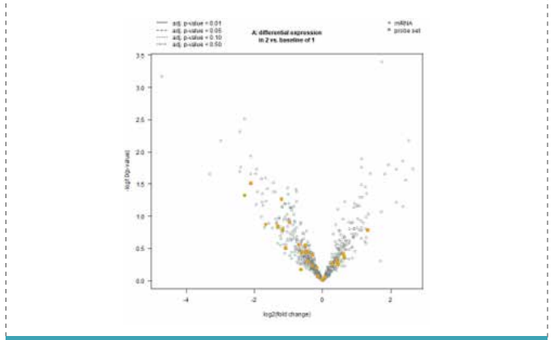
Cytokine and Chemokine Pathways



JAK-STAT Signaling Pathway



NF-kappaB Signaling



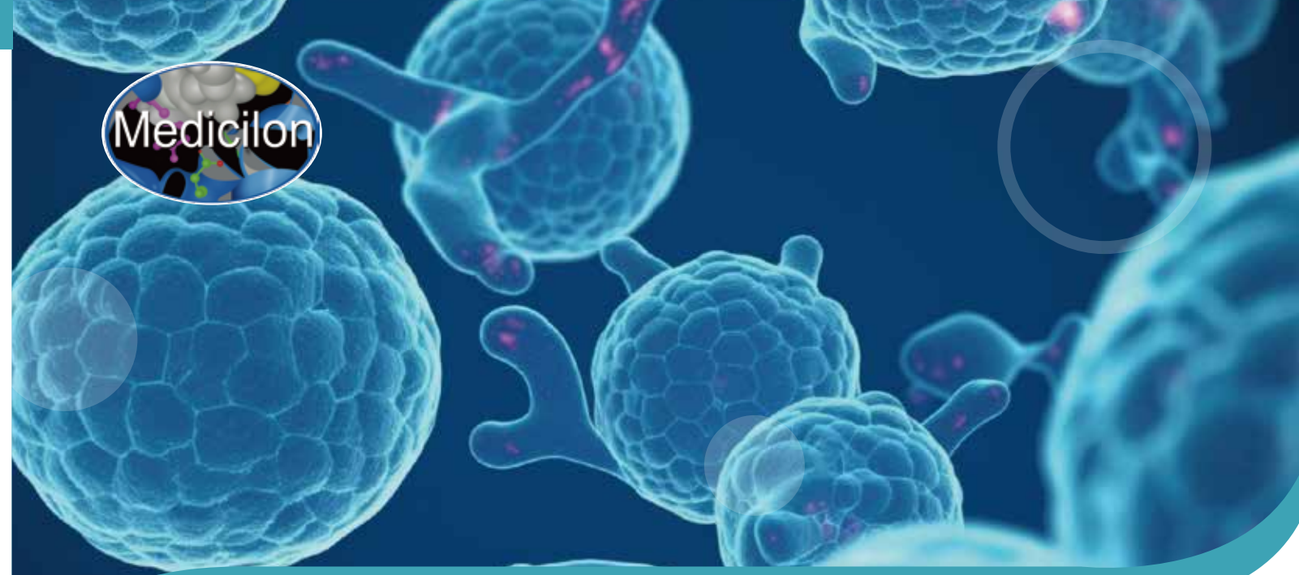
Wnt Signaling Pathway

MEDICILON

Address: 50 Soldiers Field Place, Boston, MA 02135

Website: www.medicilon.com

Email: marketing@medicilon.com



Medicilon NanoString nCounter Detection Platform

The high-throughput research on RNA at the transcriptional level provides an important research method for people to deeply understand the transcriptional regulation, signal transduction mechanism, and molecular pathological typing of diseases in biological processes.

Commonly used high-throughput research methods such as gene chips and RNA sequencing can generate a large amount of information. However, these technologies require high sample quality and are expensive and the experimental results often need to be verified by qPCR. However, when conducting quantitative research on multiple genes, the traditional qPCR method cannot meet the needs of quantitative detection of multiple genes due to many and complicated experimental steps and obviously insufficient throughput. In addition, clinical samples are usually FFPE samples, which will cause a large amount of RNA degradation and fragmentation during preparation and storage. Therefore, both qPCR and RNA-seq are difficult to perform accurate quantitative analysis on such samples.

For the above problems, NanoString gives a perfect solution. The NanoString digital gene analysis system based on the principle of hybridization directly detects individual mRNA transcripts marked by barcode probes, and quantifies them by digital counting. This process does not require enzymatic and amplification processes, and only 100 ng of RNA can accurately quantify more than 800 specific mRNA transcripts. The sensitivity and accuracy of its detection are comparable to real-time quantitative PCR (RT-PCR) technology. Nanostring technology can directly quantify RNA in FFPE samples, cell lysates and even whole blood without RNA extraction. This could further reduce the potential biases that may be caused by the extraction process.

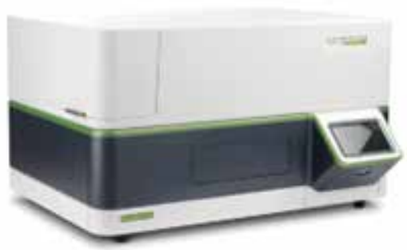
In recent years, NanoString technology has been widely applied to the frontier fields of biopharmaceutical, including the validation of high-throughput gene expression results, gene expression profiling studies, gene regulatory network research, and clinical disease molecular classification, diagnosis and prognosis.

NanoString Technical Features

- Digitizing - Single-molecule digital direct counting for digital analysis or verification of targets identified by next-generation sequencing
- High Accuracy - Directly detect the number of RNA molecules to obtain gene expression without reverse transcription and PCR amplification
- High Sensitivity - Femtomolar (10-15) level sensitivity, comparable to qPCR
- Multiple Detection - Single tube can simultaneously detect up to 800 target molecules
- High Degree of Automation - Only three simple steps are required to avoid the interference of human factors to the

greatest extent

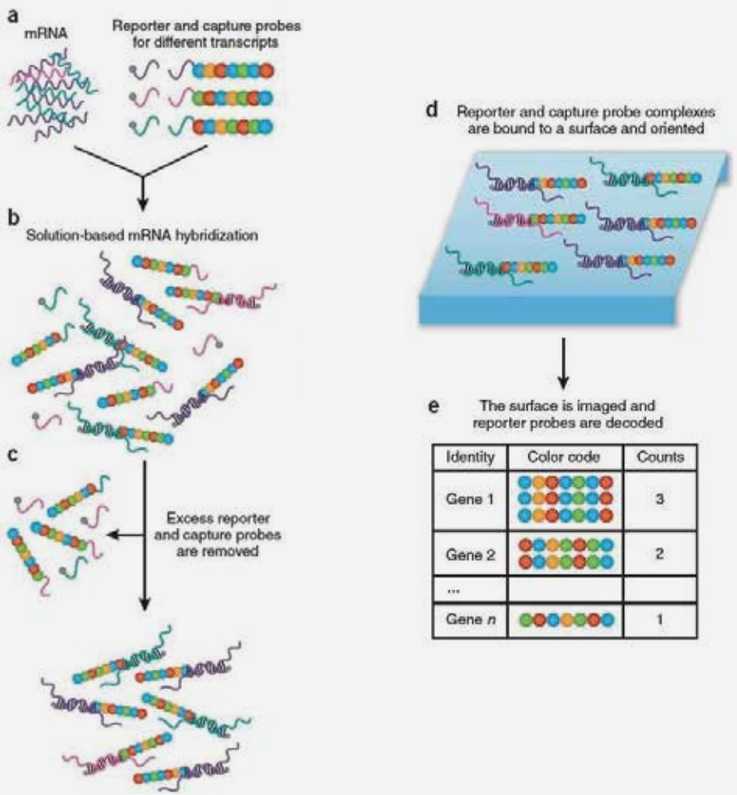
- High Sample Compatibility - Efficient detection of FFPE-embedded sections, direct detection of blood and cell lysates without RNA extraction and purification
- Wide Range of Applications - Gene Expression, miRNA Expression, miRGE, CNV, Gene Fusion, Single Cell Expression, RNA et.al.



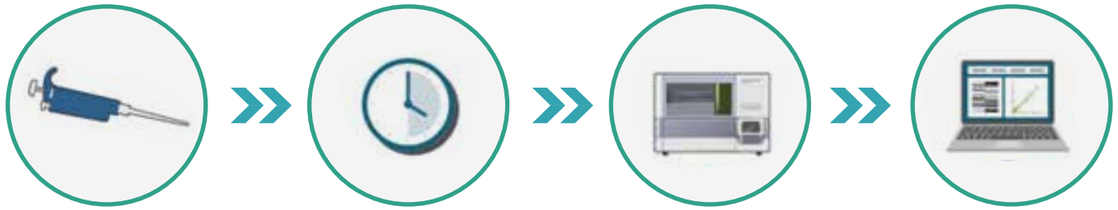
nCounter SPRINT

nCounter Pro

Technical Principle



Operating Procedures



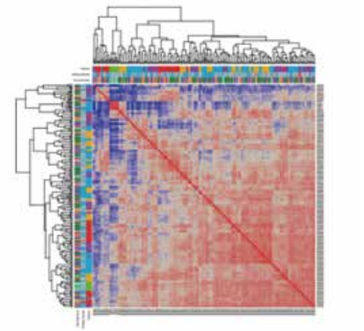
15 minutes sample preparation

Hybridization ovemight

Sample loading

Result analysis

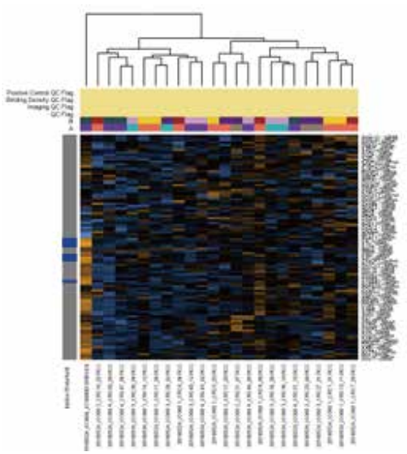
Result Analysis



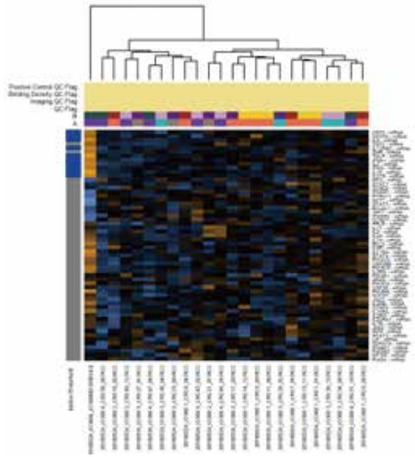
nSolver™ Analysis Software

ROSALIND® Platform

Generated Heatmaps for Different Pathways



Cytokine and Chemokine Pathways



JAK-STAT Signaling Pathway

MEDICILON